

On the Road

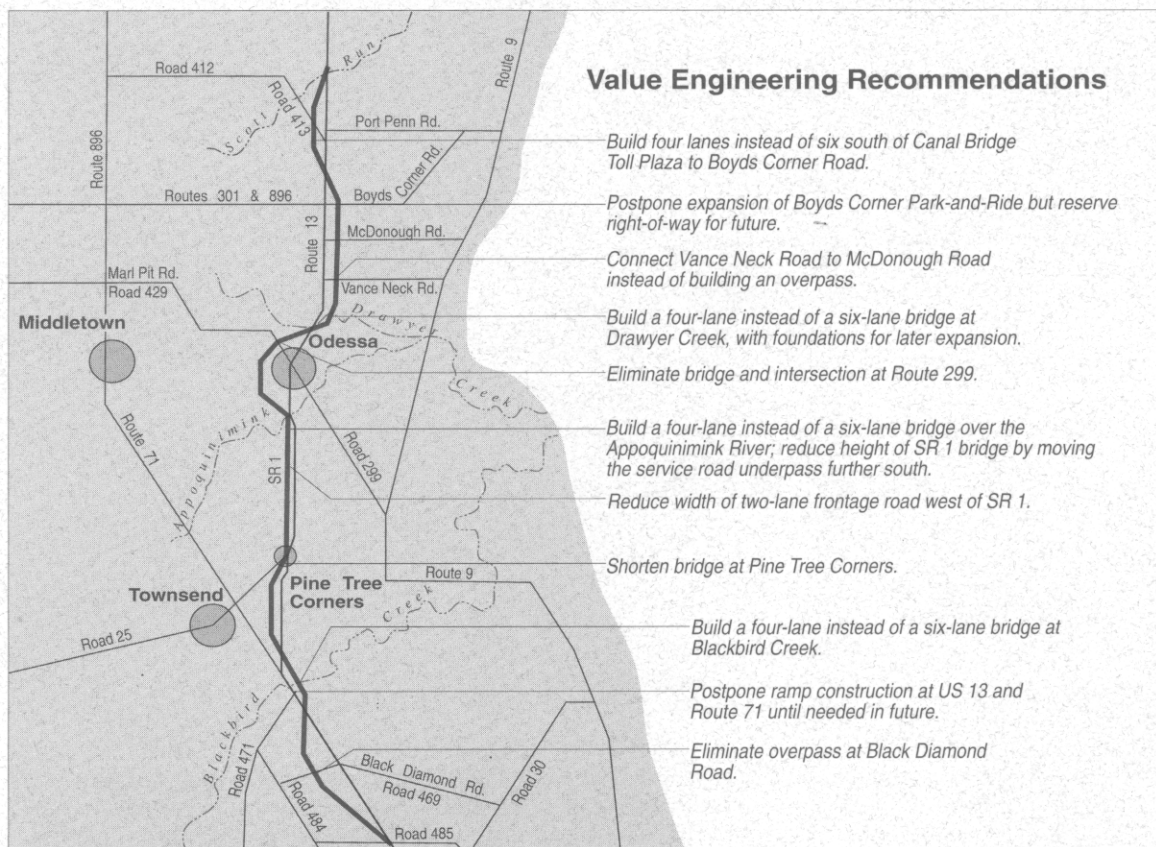
THE RELIEF ROUTE — SR 1

Issue 15

DELAWARE ROUTE 7 TO US ROUTE 113

Winter 1994

VALUE ENGINEERS RECOMMEND CHANGES



A team of transportation specialists at the Delaware Department of Transportation (DelDOT) used "fresh eyes" to recommend changes to the design of SR 1 in an effort to cut costs. The potential savings in construction costs are the result of a value-engineering review of the SR 1 section south of the C&D Canal to north of Smyrna. The results of their efforts will be presented at a public workshop on March 24, 1994 at the Odessa Fire Hall on Main Street. After the workshop, the recommendations will be finalized.

Value engineering (VE) is not a new process at DelDOT, but it had not been used in recent years. The process was reinstated this year at the request of Secretary Canby and is proving, in its first run, to be effective. The process is used around the country to critique a project's design.

A team of transportation specialists, previously unfamiliar with this section of SR 1, was assembled to review the project, bringing different perspectives. The VE team developed recommendations which will save money without compromising the quality

or effectiveness of the highway's design. All of the recommended changes will remain within the 1987-approved corridor location. In some cases alternative materials were investigated for cost effectiveness. For example, a recommendation was made to reevaluate the use of steel girders on overpasses. Concrete girders, which perform as well as steel, will be used where savings result.

Other recommendations resulted in a more efficient design. The relocation of Marl Pit Road near Odessa is one example. Originally, the road was to pass under SR 1 and intersect at Route 299. In the VE recommendation, the overpass will be eliminated and Marl Pit Road will intersect US 13 north of Odessa. Overpasses will also be eliminated at Vance Neck Road and Black Diamond Road. Instead, Vance Neck Road will be connected by a service road to McDonough Road; Black Diamond Road will become a cul-de-sac.

The reduction in lanes south of the C&D Canal Bridge toll plaza near Port Penn Road is another design recommendation. Recently projected traffic volumes



Delaware Department of
Transportation

Anne P. Canby
Secretary

On the Road is published periodically by the Delaware Department of Transportation and is the official newsletter of SR 1, the US Route 13 Relief Route.

VALUE ENGINEERING PUBLIC WORK- SHOP

The recommendations of the Value Engineering process will be presented at a Public Workshop on Thursday, March 24, 1994 from 4 to 8 PM at the Fire Hall on Main Street in Odessa. DelDOT engineers and consultants will be on hand to explain the recommendations in detail and obtain comments from the public. For more information about the workshop or to receive your free copy of *On the Road*, please write or call with your request.

On the Road

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Mile STONES

• SMYRNA-DOVER BYPASS OPENING: Cutting the ribbon

Despite cloudy skies and chilly temperatures, Governor Thomas Carper cheerfully presided over the opening ceremonies of the Smyrna-Dover Bypass section of SR 1. He was first to pay the one dollar toll to ride on the new 17-mile road which extends from US 113 at Dover Air Force Base to just north of Smyrna where it joins US 13.

The opening ceremony took place on December 21, 1993 at 2:30 PM at the Main Toll Plaza in Dover. Delaware Department of Transportation Secretary Anne Canby served as Master of Ceremonies. Governor Carper and Congressman



Lieutenant Governor Ruth Minner, Governor Carper, Congressman Castle, Secretary Canby, and Division Administrator Gilbert, smile as the ribbon is cut.

Michael Castle made remarks, and John Gilbert, Division Administrator, was on hand to represent the Federal Highway Administration.

Governor Carper expressed his conviction that the highway would "make a real difference" in the quality of life for Delaware's residents. He said the highway would promote clean-air goals by eliminating polluting emissions caused by cars idling at traffic lights. Governor Carper also cited the significant economic development the highway will bring to Delaware's economy.

Congressman Castle was happy to note that Smyrna and Dover residents would be relieved of much of the seasonal beach traffic. Secretary Anne Canby ended the remarks and summed up the feelings of those assembled with the suggestion to literally "get the show on the road."

And they did when Governor Carper cut the red, white and blue ribbon which stretched across the toll plaza. He and the other invited guests were treated to a tour of the route for the first time in one of the many antique cars which formed the opening parade.

Now that the Smyrna-Dover section of SR 1 is open, travellers can bypass the 33 traffic lights they would have encountered on US 13. With the opening of the four-lane, limited-access highway, US 13 will return to local residents for shopping and other local trips, much unclogged by through traffic. ■



One of the first customers through the Main Toll Plaza in Dover.



Antique and classic cars lead the inaugural trip on the new road.



Governor Carper addresses those attending the opening ceremonies.

One PERSPECTIVE



"One Perspective" is a regular feature of *On the Road*. The interviews presented here provide readers with a personal, behind-the-scenes look at the planning, design and construction activities associated with SR 1, the US 13 Relief Route.

For this Winter 1994 issue, "One Perspective" focuses on how value engineering fits into the road-building process. David Jamison, seated at left, is Quality Control Engineer and Ray Petrucci, standing, is Value Engineer, responsible for reinstituting this valuable program at DelDOT. They recently spearheaded the value engineering effort for SR 1.

OTR. First off, what is value engineering?

DJ. Value engineering, or "VE," is a process which evaluates a project to determine if costs can be reduced. It is important to understand that the money saved is not the result of cutting out portions of the design or reducing its quality. VE modifies the design to allow it to be constructed and maintained more efficiently yet still solve the same problems and provide the same benefits as before. It's like looking at the project with "fresh eyes."

OTR. Is VE a new process?

DJ. No, VE has been around since World War II. It was first used in industries such as manufacturing and was eventually found to be very effective in the transportation industry. The Federal Highway Administration (FHWA) developed a formal process which is used in the VE of transportation projects across the country. Neither is this process new to DelDOT. It was used to evaluate projects up until the late 1980s. A lack of senior staff members, the result of early retirement, caused the program to be discontinued. However, Secretary Canby recommended that it be reinstated. The evaluation of this section of SR 1 is the first project to undergo the reinstated VE process.

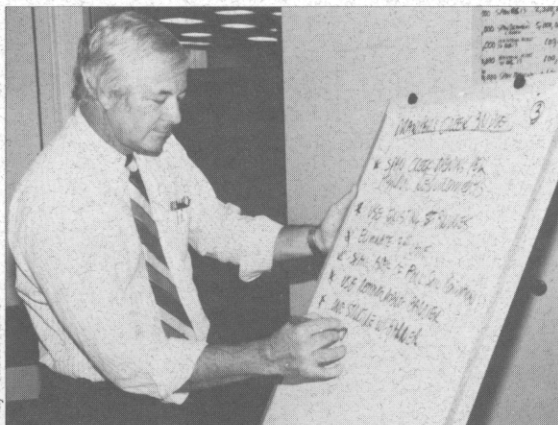
OTR. Can you tell us about the process you underwent for the sections of SR 1?

RP. Basically there are five steps. The first is to investigate—look at the design plans and talk with the design engineers—to become very familiar with the project. The second step is to "brainstorm" design alternatives. During brainstorming we are free of the constraints or preconceptions with which the design engineers worked. Once a full range of alternatives is suggested the third step is to evaluate them. Each is measured against a list of criteria, such as the cost

of construction, or the impacts on wetlands or a community, and then ranked. The highest ranked alternatives, the ones which achieve the best design solution with a minimum of impacts, are explored further during step four, the development phase. They are subjected to a "mini design" to determine their feasibility. Those that are found successful are then recommended by the VE team during the fifth step, implementation.

OTR. Are the recommendations then incorporated into the design?

RP. No, the VE team presents the recommended changes to a panel of top-level officials including Secretary Canby and representatives of FHWA. This panel decides which recommendations to consider further. They have the "big picture," such as the history of consultations with community groups and regulatory agencies, that may alter or eliminate some suggestions. Next, the recommendations are discussed at a public workshop and among environmental agency representatives to gain further comments. Then, final decisions are made by DelDOT and revisions to the designs completed.



DID YOU KNOW?

•The recommendation to connect Vance Neck Road to McDonough Road has double benefits. It eliminates a costly overpass and provides access to parcels previously landlocked.

VE consultant, Bill Ventry of Ventry Engineering, records highlights during a team discussion.

Ray Petrucci/DelDOT

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will not be great enough to initially warrant the six lanes originally planned. The VE team suggested that the same approach be taken here as is being done the entire length of SR 1—build four lanes now and design the right-of-way to accommodate the additional lanes if and when they are needed.

These and other recommendations will be the topic of a public workshop to be held March 24th from 4 to 8 PM at the Odessa Fire Hall on Main Street. DelDOT engineers and consultants will explain the recommendations in detail and talk with the public regarding the changes. The residents and business owners near this section of SR 1 played a key role in the development of the design up to and including the public hearing in February 1992. DelDOT hopes to continue this strong level of participation at the March workshop. ■

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OTR. Who is on the VE team?

DJ. The team is made up of DelDOT employees from various departments. They have a range of specialties, including bridge design, traffic and construction. Because we are just starting this process again, Ray came on board as an expert in VE. We also had a VE consultant to act as team leader. Future training sessions for other staff will be held to expand the pool of qualified VE specialists.

OTR. So VE is beginning to play an important role at DelDOT?

DJ. Certainly. We expect to apply this process to 12 projects a year. Projects totalling \$1 million and up will be screened for the VE process. And, DelDOT recently sponsored a national VE conference that was attended by 38 DelDOT engineers, as well as other department of transportation engineers from as far away as Hawaii. ■

TO OUR READERS:

The State of Delaware and the consultant team are committed to continuing the citizen-input process during the design and construction phases of the project. We invite you to write us with questions or comments regarding On the Road or to arrange for a presentation to bring your group up to date on the Relief Route.

For More INFORMATION

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- Design Issues: contact David DuPlessis, Project Manager, at 302-739-3834
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- Right-of-Way Acquisition and Relocation: contact Ira White, Project Acquisitions Manager, at 302-739-2776

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